

ABSTRACT OF THE DISCLOSURE

This invention comprises devices, compositions and methods for quantitative detecting analytes in complex solutions by Raman spectroscopy. Passivating agents associated with enhancing surfaces can decrease direct, non-specific interaction

5 between analytes and the enhancing surface. By decreasing direct interaction between analytes and enhancing surfaces, relatively more selective detection of the analyte can be performed. Analyte receptors can be either highly selective or have lesser selectivity. Reproducible, concentration-dependent Raman spectroscopic analyses can be performed using flow-through cells incorporating passivated substrates. By using

10 receptors having low selectivity, different analytes can be detected simultaneously. Flow cells are provided that permit rapid, and/or continuous monitoring of samples, thereby permitting automated sample analysis.

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